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Canada's Export Development Plan for **NORWAY**




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CANADA'S
EXPORT DEVELOPMENT PLAN
FOR NORWAY





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FOREWORD

Canada's Export Development Plan for Norway has been prepared to assist existing and potential exporters interested in expanding business in Norway. The review and analysis of this market provide the basis for the market development activities in Norway over the next two to three years planned by the Department of External Affairs. The provincial governments, also active in supporting Canadian exporters, were consulted during the preparation of the plan. The plan does not attempt to exhaustively cover Canadian interests or Norwegian opportunities. Rather, it highlights significant market opportunities in specific sectors in which Canadian supply capability is well established.

The plan is presented in three parts. The Executive Summary provides a brief review of Canadian/Norwegian trade relations and highlights the principal market opportunities identified in each of the industry sectors included in the plan. Part I, the Market Overview, focuses on bilateral Canada-Norway relationships and socio-economic and political conditions in Norway. This will be particularly useful to the reader seeking a broad introduction to the Canada-Norway trade environment. Part II, Market Opportunities and Sector Marketing Plans, will be of most interest to firms supplying goods and services in the industry sectors which have been selected.

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EXPORT DEVELOPMENT PLAN

EXECUTIVE SUMMARY

Objective

The major theme of a Canadian Export Strategy for the 1980s as approved by the Cabinet Committee on Economic Development is the selectivity of markets coupled with a greater focus and co-ordination of Canada's export marketing efforts. In so doing, the government recognizes the critical role of the private sector and invites its participation and that of the provinces in pursuing those activities that will contribute to the objective of expanding Canada's share of the Norwegian market.

Norway's emergence in the 1970s as a major oil and gas producer has greatly improved prospects for an enhanced Canada-Norwegian bilateral relationship, particularly regarding trade and industrial co-operation. In practically one generation, Norway has been transformed into a highly industrialized country, ranking seventh in the world in GNP per capita in 1980. This rapid development was initially facilitated by availability of inexpensive and abundant hydroelectric power, and led to major investments of high energy consuming industries. This trend has levelled off, being replaced by oil and gas related technologies in manufacturing and services for offshore development. Two-way trade between Canada and Norway has increased sixfold since 1960. Throughout this period, Canada has maintained a sizable trade surplus and in 1980 this amounted to a record \$254.5 million. One item - nickel in ores - is responsible for almost half the total value of our sales (\$157 million in 1980). The crude material commodity category taken as a whole represents fully 72 per cent of Canada's overall exports to Norway. While this latter category has grown in importance during the last two years, the agricultural and end product commodity groups have declined in importance.

There obviously are excellent opportunities to improve on our exports of semi and fully manufactured products to Norway in a variety of sectors, and to that end this paper reviews and analyzes recent Canadian export performance, identifies the opportunities and constraints that the future export effort must address and sets out an export development plan taking these factors into account.

In order to accomplish this objective, this document is intended:

1. to guide the action and resource allocation of the federal government in providing an effective program of assistance to exporters and in fostering an environment conducive to Canadian export development in Norway;

2. to set out a marketing plan designed to take advantage of the market potential and to overcome the constraints facing Canadian exports to Norway,
3. to identify opportunities for export concentration and to stimulate and assist the private sector in pursuing them; and,
4. to provide a focal point for co-ordinating the marketing efforts of the federal and provincial governments in support of the private sector.

Canadian Trade Development Efforts to Date

Canada has devoted considerable time in the past two years, with only modest success, in attempting to develop industrial co-operation projects with Norway. On the official level, the most recent activity involved a visit by Canadian government representatives to Oslo in April 1980 to identify projects and joint ventures where mutual industrial collaboration might be pursued. Unfortunately, the Norwegians have tended to interpret industrial co-operation as the awarding of oil and gas concessions in the North Sea in return for an applicant providing attractive industrial benefits to Norway. As such, we have been concentrating our activities in assisting Canadian oil companies to obtain blocks in North Sea concession rounds.

However, with the growing interest of the Norwegian petroleum industry to participate in offshore oil and gas developments in eastern Canada and the Arctic, conditions for more meaningful industrial co-operation between the two countries have been created. From the Norwegian perspective, Canada has become a much more attractive market and prospective partner. From our point of view, Norway, in addition to becoming a more accessible market, has also become more important as a potential source of technology and research information for offshore energy development.

Examples of recent co-operative arrangements between Norwegian and Canadian companies include the formation of:

- 1) SNC Aker Offshore Ltd., Calgary, a joint venture between Aker Engineering A/S, Oslo and SNC, Montreal, and
- 2) Northern Atlantic Contractors Ltd., St. John's, Newfoundland, a joint venture between Norwegian Contractors, Oslo, Lundrigons Ltd., St. John's and Dillingham Ltd., Vancouver.

Characteristics of the Norwegian Market and Canadian Trade Opportunities

Norway's petro dollars have naturally attracted many countries to look more carefully at trade opportunities in the marketplace, and Canada will have to put forward a persistent, well co-ordinated effort if we

are to be successful. The Norwegian government, at the same time, is being very pragmatic in how it proposes to use its oil and gas revenues. Oil revenues and high wages paid to offshore workers have tended to increase inflationary pressures on the domestic economy and added to the competitive difficulties of Norwegian industry. The oil industry and the cash it generates will be used to counteract these effects, and generally help restructure other traditional Norwegian manufacturing activities so that they will continue to be competitive in world markets. The government has also suggested that some offshore money could be employed to help Norwegian firms establish subsidiaries abroad and increase Norwegian ownership in foreign companies in order to secure new export markets or technological inputs. In addition, the government will use preferential treatment in handing out new offshore concessions to encourage foreign companies to set up industrial joint ventures with Norwegian firms or sponsor research projects again with the aim of gaining access to markets, raw materials or technical know-how from abroad. An official survey indicates that 130 projects have so far been set up in this way. Finally, plans are being drawn up for further onshore industrial development based on oil and gas feedstocks from the North Sea. A major pipeline has been proposed to bring these raw materials direct to Norway for the first time, to be complemented with the construction of plants for making ammonia and methanol.

The most promising prospects for Canadian exports to Norway appear to be in the oil and gas sector and encompass a wide range of goods and services associated with the development of offshore petroleum. Such products include communication equipment, STOL aircraft, safety clothing, and environmental control equipment, in addition to traditional oil and gas exploration, development and production equipment. For example, communication systems play an important role in the North Sea operations.

Notwithstanding the priority rating being proposed for this sector, the government will continue to give support through its regular programs to activities promoting any sector which will contribute to the prescribed objectives.

The Overall Strategy

The market development plan for Norway identifies a number of instruments available to the federal government to assist Canadian companies in increasing their penetration of the Norwegian import market. These various forms of assistance have been developed in response to the need to capitalize on opportunities and overcome constraints existing in export markets. A summarized action plan for Norway, included with this Executive Summary, identifies a number of activities and events planned for improving Canadian export performance in the Norwegian market.

Extensive use of the Fairs and Missions Program will be continued with considerable importance being given to ministerial and other high level government-to-government visits. The Program for Export Market

Development (PEMD) will also be promoted. PEMD F, which can help a company sustain ongoing market analysis and market development activities and PEMD C, which assists companies to participate in trade fairs, will be of particular benefit to firms exporting to Norway.

Steps will also be taken to make Norwegian buyers more aware of Canadian expertise and products through seminars, speeches by Ministers, publicity and press releases, pamphlets and other promotional materials. To meet information needs, new studies will be undertaken. The Western European Division of the Bureau of European Affairs in the Department of External Affairs and in sector specific areas, selected Industry Sector Branches of the Department of Regional Industrial Expansion have prime responsibility for the implementation of the plan. The key to success is the co-ordination and co-operation of all federal departments, provincial governments and active involvement by business and industry. Consultation in the formation of the plan with the provinces, and with other federal departments has taken place. Ongoing consultations by departmental officials with businessmen have ensured that private sector views have also been incorporated. Given this concentration of effort and dedication of purposes, there is every reason to expect that Canada's share of the Norwegian market can be maintained or possibly increased.

SUMMARIZED ACTION PLAN FOR NORWAY

<u>YEAR</u>	<u>ACTIVITIES/EVENTS</u>	<u>PRIME RESPONSIBILITY CENTRE</u>
1982-83	Arrange visit of leading Norwegian political figures to Canada	GEP/Post/DEP
	Prepare follow-up articles in Canada Commerce on trade potential	Post/DEP/IFS
	Prepare in-house study to match Canadian supply capabilities in offshore oil and gas equipment with Norwegian requirements and identify prospects for joint ventures	Post/MCH/TIB
	Analyze Norway's development plans for the oil and gas sector to determine opportunities for Canadian sales	DEP/Post
	Undertake joint study by Post in Oslo, London and Glasgow to co-ordinate Canadian marketing efforts of offshore oil and gas equipment for the North Sea market	Post/MCH/TIB/DAP
	Participate with a national exhibit at Offshore Northern Seas 82 (ONS 82) in Stavanger, Norway.	DEP/Post/TIB/MCH
	Attend the Offshore Northern Seas Show (ONS) with an official trade delegation possibly led by the Minister of State for Trade	DEP/Post/MCH/TIB
	Liaise closely with participating provincial governments, e.g. Alberta, Nova Scotia, Quebec, at ONS 82 to ensure a unified and cohesive Canadian presence	Post/DEP/DPP/ Regional Office
	Compile as a reference source updated Norwegian buyers' guide of offshore oil and gas related goods and services	Post
	Invite selected buyers from Norway to visit Canada as follow-up to ONS 82	Post/DEP/MCH/TIB

<u>ONGOING</u>	<u>ACTIVITIES/EVENTS</u>	<u>PRIME RESPONSIBILITY CENTRE</u>
	As a further follow-up to ONS 82, organize an outgoing offshore technology mission of Canadian manufacturers seeking joint ventures, licensing agreements or direct sales with Norwegian firms.	Post/DEP/GEP
	Co-sponsor a seminar on Norwegian/Canadian trade and investment opportunities in the offshore sector with the Export Council of Norway	GEP/Post/DEP
	Publish an updated Canadian oil and gas directory for distribution to potential customers.	MCH/TIB
	Prepare paper on areas of potential for Canadian companies under joint ventures and industrial co-operation	Post/DEP
	Arrange Canola mission to Norway	GMO/Post
	Attend the Offshore Northern Seas Show with an official trade delegation	
1984	Participate with a national exhibit at Offshore Northern Seas 84 in Stavanger, Norway	DEP/Post/MCH/TIB

PART I

MARKET OVERVIEW

I. MARKET OVERVIEW

Objective

A major theme of a paper "Canadian Export Strategy for the 1980s" is the introduction of greater focus and co-ordination to Canada's marketing efforts. As approved by the Cabinet Committee on Economic Development, a series of market development plans are being drafted for Canada's priority markets. A central element of the exercise is a two to three-year action plan for each country. This document sets out an export market development plan for Norway through:

- i) creating a strategy framework to guide the actions and resources of the federal government in providing an effective program of assistance to, and an environment for, Canadian export development in Norway,
- ii) elaborating a marketing plan to take advantage of the opportunities and to overcome the constraints facing Canadian exports to Norway;
- iii) providing a working document to use as the basis for discussions aimed at co-ordinating the marketing efforts of the federal government in co-operation with provincial governments and the private sector.

The major Canadian trade objectives in Norway are:

1. to ensure an environment which will encourage the strengthening of the Canadian presence in Norway's ambitious offshore development;
2. to increase exports of goods and services at an amount sufficient to maintain or improve Canada's market share; and
3. to pursue opportunities for investment, joint ventures and other forms of co-operation.

The overall strategy to assist the federal government in the allocation of resources for market development in Norway and to co-ordinate its activities with those of the provincial governments and the private sector is summarized in the Action Plan outlined in the Executive Summary. The three-year framework for Norway is designed to capitalize on opportunities and to overcome constraints affecting Canadian exports. As such, it incorporates recommendations arising from the priority sector action plan, particularly where common instruments are proposed.

The activities and events for 1982/83 have been planned in accordance with the expected allocation of funds for market development activities in Norway in the coming fiscal year. Activities and events

indicated for subsequent years, 1983/84 and 1984/85, are suggested as a response to an identified need and will be more closely evaluated in terms of budgetary considerations at a later date. Additions and/or deletions for these subsequent years may be made as a result of ongoing interdepartmental discussions and consultations with the provinces and the private sector.

The Canada/Norwegian Environment

Recent dynamic developments in the energy sectors in Canada and Norway serve to underline the potential for a stronger bilateral relationship, especially regarding trade and industrial co-operation. Canada's National Energy Plan maps out the federal government's intention to gradually Canadianize the oil and gas industry and to make Canada energy self-sufficient by the early 1990s. Norway does not have these problems to overcome. Its own oil firms, the state company Statoil, Norsk Hydro, and Saga Petroleum, are quickly taking on a dominant role in domestic oil exploration and production, and the current annual flow of oil and gas from three Norwegian fields is already more than five times the country's own petroleum needs. While output in 1980 was 50 million tonnes of oil equivalents (TOE), so many new promising finds have been discovered in the North Sea and on the vast continental shelf off central and northern Norway that Norway may well have to set up a list of development priorities to keep output from going over the production ceiling of 90 million TOE established by Parliament in a bid to limit the oil industries impact on the national economy. Norway's Oil and Energy Minister recently noted that Norway's share in the North Sea alone is estimated at four to five billion TOE, implying that the "oil adventure" could last a century or more at present rates of production.

The size of trade opportunities in Norway can be seen when it is realized that investment in offshore energy development, operation and maintenance is expected to run at \$3.5 billion to \$4.7 billion a year for the rest of this century. Activities will include advanced seismic surveying, the design, construction and installation of large, complex offshore structures like drilling rigs and production platforms, rig and supply ship operation, structural inspection and repair services, and the manufacturing of a wide range of sophisticated products including drilling equipment, submersibles and other diving gear, computerized dynamic positioning and anti-collision systems, and special-purpose communications equipment. Despite impressive and expanding capabilities of its own industry, it is estimated that approximately 50 per cent of the high technology equipment required for the exploration, development and production of Norway's offshore oil and gas resources must be imported. Since Canada has considerable experience working in similar environments that exist in Norway, Canadian expertise in oil and gas exploration has an excellent chance of finding ready markets in Norway. As well, opportunities are obvious for technology exchange or joint ventures to carry out exploration and production work either in Norway or off Canada's east coast and Arctic waters.

Similarly, the national governments in both countries envisage the energy sector as the backbone of their economic development strategies for the 1980s and beyond. Besides reinvesting vast oil and gas revenues back into the energy sector, Norwegian authorities are also using part of the revenues to restructure its traditional manufacturing industries, including shipbuilding and forestry production in an attempt to recover markets lost in the 1970s. As well, Norway plans to develop a new petrochemical industry onshore, mainly involving a new pipeline for supplying feedstocks to plants for the production of ammonia and methanol. Last year, the offshore sector had already become responsible for 15 per cent of the countries gross domestic product and a third of its total export sales, not counting oil-related equipment or services. This contribution is expected to rise even further during the next few years, while oil and gas revenues should provide an ever-increasing share of central government income.

Canada has also concentrated on the energy sector as a major contributor to the national economy. Some estimates claim up to \$200 billion will be invested in the energy or energy related sectors in Canada over the next decade, with the federal government playing a major role in co-operation with provincial governments and the private sector.

It is also apparent that Canada and Norway share similar views on the way in which energy developments must contribute significant industrial benefits to the national economy, including the active participation of national oil companies and domestic manufacturing firms in oil exploration and development. Currently, Norway's offshore industry employs a little more than 34,000 people or 2.3 per cent of the work force. This is expected to modestly expand as new fields in the North Sea are brought on stream, and export contracts increase for engineering and design services for oil and gas projects in other parts of the world. Norwegian firms have been successful in participating in such international ventures as a member of a larger consortium, offering its own special expertise acquired from past experience. Canadian firms should look more carefully at these and other developments that are taking place, as it appears there are many opportunities for linkage that could result in significant mutual advantage.

Canadians have an excellent reputation in Norway and Canada at present enjoys a particularly high profile following two recent state visits. Prime Minister Trudeau visited Oslo in 1980, and the Governor General, accompanied by the Secretary of State for External Affairs, visited the capital and outlying cities in May 1981, reinforcing our current political and economic relationship, particularly our obligations under the NATO agreement.

Characteristics of the Norwegian Market

1. Demographic and Environmental

Norway shares with Sweden the Scandinavian peninsula in the northwest corner of Europe. The Norwegian part is essentially a strip of land 50 to 250 miles wide and 1,100 miles long, covering the western side of this peninsula and facing the North Sea to the west and the "Skagerak", the strait separating it from Denmark, to the south. The Norwegian/Swedish border generally follows a heavily wooded mountain chain and is easily traversed in only a few places. In the far north, Norway has common borders with both Finland and the U.S.S.R. It has a total area of about 325,000 square kilometres (125,000 square miles).

Most of Norway can be described as rugged upland, intersected by valleys and fjords. Along the western coast, lowland areas are small and narrow, and the only large lowland region in the southern part of the country is around the Oslo fjord, extending north northeast into the central highland. Only 2.9 per cent of the land surface is used for agriculture and much of the remainder, especially in the north, is above the tree line.

Norway's four million people are widely scattered throughout the country but are tending to move to the main population centres. About 66 per cent now live in urban areas. Other main urban centres are Bergen (211,700), Trondheim (135,000) and Stavanger (88,000).

Oslo is the third most northerly capital city in the world. Despite its northern latitude, however, Oslo's climate is moderate, mainly due to the warming influence of the Gulf Stream. It can be compared to Halifax, Nova Scotia, with mild summers and hot spells, a wet autumn and winter temperatures around the freezing mark.

Due to isolated towns especially along its west coast, Norway has developed a unique coastal express shipping service to facilitate development of its expansive northern regions. Norway can also boast the fourth largest merchant shipping fleet in the world. Its 21.5 million gross tons, about two-thirds tankers, generate revenues up to 30 per cent of Norway's foreign income. There is also a rail network connecting the main cities and a ferry/container service to the Continent. Although there is no direct container service between Norway and Canada, there are regular sailings that make connections via Sweden (Gothenburg) and European or British ports. There are no free zones or ports in Norway, and warehouse facilities at various harbours are limited.

2. Socio-Economic

In 1980, Norway's per capita gross national product (GNP) was \$16,000, ranking 7th internationally (see Appendix I). It experienced its first balance of payments surplus in 11 years in 1980, putting the country \$1.1 billion in the black on current account compared with a

deficit of \$1.24 billion in 1979. North Sea oil and gas sales doubled to almost \$10 billion, reflecting a 50-per-cent price increase and a 20-per-cent increase in output to 50 million TOE. Exports of non-oil commodities also earned more in 1980, increasing by 13 per cent to \$11 billion. However, the volume of sales dropped slightly from the previous year as the effect of the international recession began to make itself felt. Overall, Norway had an export surplus for goods and services of \$4 billion in 1980.

The oil sector is now on the verge of overtaking manufacturing in terms of contributions to the gross domestic product. Earnings from the North Sea and work generated by exploration and development activities have helped to shelter the country from recession and to maintain the lowest unemployment rate of OECD countries of less than two per cent in 1980.

Norway introduced a wage and price freeze at the end of 1978 to hold down inflation and improve the competitive position of the country's export industries. As of January 1, 1980, this program was dropped and saw a strong increase in industrial wage costs to 10 per cent from only 3.5 per cent in 1979. As well, inflation surged to 12 per cent from less than 5 per cent in 1979. Norway has borrowed considerably to fund its many social and industrial development programs, and the net debt now stands at \$24 billion. Fortunately, the large trade surplus in 1980 covered the heavy interest payments on these foreign loans, however there is concern about the inflationary effects of continued large budget deficits of the present size.

The average Norwegian is seeing gradual improvement in disposable income as wages increase and direct taxes are lowered. The many social services provided by the government help cushion the effects of inflation, however some subsidies, such as for food, are being lowered. The life style is centred around outdoor sports, especially in the winter. It is significant that Oslo is one of the largest cities in the world, since most of the space within the city limits is taken up by a well maintained but quite wild area of lakes, streams and forests reserved for recreation. The hills around Oslo are threaded with 1,920 kilometres (1,200 miles) of cross-country ski trails, 160 kilometres (100 miles) of them floodlit at night. Most Norwegians living in urban areas also own cottages in the country, and these are well used year-round.

3. Macroeconomic Trends and National Planning

The Norwegian government is well aware of the negative inflationary effects oil revenues and high wages for offshore workers have on the national economy. As a result, it has used part of the revenues to help restructure other traditional Norwegian manufacturing sectors, and make them more competitive on world markets. This action has not been totally successful, however, as there has been no recovery of markets lost in the 1970s. As a result of mild recessions in Norway's principal export markets, such as Britain, Federal Republic of Germany and Sweden, the future outlook is not particularly promising. A

revised policy on industrial strategy was introduced by the government in 1980, and favours a trend away from selective state aid to industry in favour of more general measures to stimulate investment and productivity growth. It also announced plans to extend the international involvement of Norwegian companies through the creation of foreign subsidiaries or the purchase of existing firms abroad and also develop a new petrochemical industry using offshore feedstocks to supply plants for the production of ammonia and methanol. Over the near term, domestic demand for goods and services is expected to expand enough to maintain employment virtually unaltered in 1981, and a continued rise in oil prices and production should be enough to keep the balance of payments in the black.

The government also practises preferential treatment when awarding exploration concessions offshore to encourage new investments in Norway. This has resulted in many joint ventures being formed between foreign and Norwegian companies, mainly in the energy sector to exploit offshore oil and gas exploration and production.

With the election of a new Conservative government in the fall of 1981, a new controversy has developed over how rapidly Norway should increase its oil and gas production, and in what way. The new Prime Minister has advocated an expanded role for Norwegian private enterprise in future energy schemes, and appears to favour more involvement as well by multinational oil companies in order to help support expanded oil and gas production. Taxes and royalties generated by oil and gas production totalled \$7 billion in 1980, roughly equal to 15 per cent of GNP. But even with these oil revenues, Norway had a record budget deficit of \$4 billion in 1980 and a similar amount is expected in 1982. Additional pressure is coming from Western energy planners as well, including the International Energy Agency, which urge Norway to develop some of its large gas fields to the point of production, which could then be used to offset the effects of a future energy crisis. American officials also view Norwegian oil and gas reserves as a handy and logical alternative to Soviet supplies being offered to Western Europe.

4. Trade Policy

Norway's trade policy is based on the principle of a free market economy. Foreign firms are free to export to Norway or negotiate technical assistance contracts, licensing agreements or joint ventures with Norwegian firms without state supervision and without limitation of foreign exchange transactions. The export of capital is subject to government approval, however, and an import licence is required for many agricultural goods, including live animals, animal products, plants, fruit and vegetables and products thereof.

Norway is a member of the European Free Trade Association (EFTA), the Organization for Economic Cooperation and Development (OECD), the General Agreement on Tariffs and Trade (GATT) and other international economic organizations. Besides Norway, the EFTA group includes Sweden, Finland, Iceland, Austria, Switzerland and Portugal. With the

signing of the EFTA agreement in 1959, Norway abolished its duties on imports from other EFTA countries. A free trade agreement also came into force on July 1, 1973, between EFTA and the European Economic Community (EEC) for all manufactured goods. Agricultural products are excluded.

Canada's main objective regarding our economic and trade relationship with Norway is to maintain and increase where possible our exports to this market for Canadian goods and services. In addition, Canadian and Norwegian firms compete in certain sectors internationally, especially in mineral production, lumber, pulp and paper and fish products. For these reasons, Canadian firms should closely monitor Norwegian trade and industrial development policies. In some cases, Norwegian measures could adversely affect Canada's commercial and trade interests abroad; equally, they may present unique opportunities for Canadian firms to export directly to Norway.

5. Trade Characteristics and Balance of Payments

Norway experienced deficits in foreign trade in past years, however recent increases in sales of oil and gas have contributed to a significant surplus in 1980 that is expected to grow in the future. In 1980, the overall trade surplus was \$4 billion.

Norway's traditional commodity exports include fish products, food-stuffs, pulp, ores, chemicals, paper (board), metal goods and machinery. Five countries - Sweden, Federal Republic of Germany, Britain, Denmark and the United States - regularly take more than half of Norway's commodity exports. EFTA and EEC countries account for about three quarters of total export earnings. Exports of commodities (excluding ships, platforms, crude oil and gas) remained virtually unchanged in volume in 1980 vs 1979, while increasing in price by 13 per cent. Foreign sales of oil and gas surged ahead to \$10 billion in 1980, reflecting a modest increase in production and a 52-per-cent increase in price over the 1979 average. The same five countries listed above are Norway's principal sources of imports. Canada ranked 11th in 1980.

Increased earnings from oil and gas and higher prices for commodity exports gave Norway its first balance of payments surplus for 11 years in 1980, with a \$1.1-billion surplus replacing a \$1.24-billion deficit on current account in 1979. It is expected that Norway will become a net exporter of capital by the middle of the 1980s.

Canadian Trade with Norway

Canadian exports to Norway have increased 290 per cent since 1972, while our imports have doubled. (See Appendix 2). Canada has maintained a sizable trade surplus throughout this period and in 1981 this amounted to a record \$253.3 million. One item, nickel in ores, accounted for almost half the total value of our sales (\$233 million out of \$422 million) and crude materials represented 78.8 per cent of Canada's overall exports to Norway. (See Appendix 3). The past two

years have seen significant increases in some manufactured items including aircraft, telecommunications equipment, construction machinery, and defence products. While Canada is Norway's 15th largest trading partner in terms of exports, Norway ranks 21st as an export market for Canada (see Appendix 4). It is our largest export market in Scandinavia, however it ranks about equal with Sweden if the nickel is excluded.

In summary, prospects for Canadian/Norwegian trade during 1982/83 are excellent. As oil revenues rise, Norway will be in the enviable position of determining how to distribute increasing amounts of surplus capital. This will mean major opportunities for Canada in development of the offshore energy sector, as well as potential participation in restructuring efforts by the Norwegian government in the shipbuilding, wood processing and fishing sectors. Canadian companies should look carefully into joint ventures or technology exchange agreements as a principal way to enter the Norwegian market.

Canadian Trade Development Instruments

To assist Canadian exporters and to provide focus for public and private sector marketing initiatives, Canada's Export Development Plan for Norway makes use of a variety of instruments. High level visits, studies, attendance at the prominent Offshore Northern Seas Show, seminars, buyers' guides and incoming missions promise an exciting schedule of events to promote Canadian exports to Norway.

Canada has devoted considerable time in the past two years, with only modest success, in attempting to develop industrial co-operation projects with Norway. On the official level, the most recent activity involved a visit by Canadian government representatives to Oslo in April 1980 to identify projects and joint ventures where mutual industrial collaboration might be pursued. Unfortunately, the Norwegians have tended to interpret industrial co-operation as the awarding of oil and gas concessions in the North Sea in return for an applicant providing attractive industrial benefits to Norway. As such, we have been concentrating our activities in assisting Canadian oil companies to obtain blocks in North Sea concession rounds.

However, with the growing interest of the Norwegian petroleum industry to participate in offshore oil and gas developments in eastern Canada and the Arctic, conditions for more meaningful industrial co-operation between the two countries have been created. From the Norwegian perspective, Canada has become a much more attractive market and prospective partner. From our point of view, Norway, in addition to becoming a more accessible market, has also become more important as a potential source of technology and research information for offshore energy development.

Extensive use of the Promotional Projects Program will be continued with considerable importance being given to ministerial and other high level government-to-government visits. The Program for Export Market Development (PEMD) will also be promoted: PEMD F, which may help a

company sustain ongoing market analysis and market development activities, and PEMD C, which assists companies to participate in trade fairs, will be of particular benefit to firms exporting to Norway. Steps will also be taken to make Norwegian buyers more aware of Canadian expertise and products through seminars, speeches by Ministers, press releases, and other promotional materials.

PART II

MARKET OPPORTUNITIES AND SECTOR MARKETING PLAN

II. MARKET OPPORTUNITIES AND SECTOR MARKETING PLANS

Oil and Gas Equipment and Services

a) The Opportunity

The exploration, development and production of Norway's offshore oil and gas reserves is exerting a growing influence on the Norwegian economy and will continue to do so. In 1980, Norway's GDP was approximately \$53 billion and total exports amounted to roughly \$27 billion. The value of petroleum production was more than \$8 billion or 15 per cent of the GDP and 30 per cent of total exports. State revenues from oil and gas taxation represented 40 per cent of the Norwegian national budget.

Current annual production from Norwegian oil and gas fields is approximately 50 million tons of oil equivalent (TOE) while Norway's present yearly consumption of petroleum products is a mere 8 million tons. Total recoverable reserves are estimated at 4.7 billion TOE and it is commonly accepted that even with accelerated production the country's reserves will last for at least 100 years.

According to senior officials in the Ministry of Petroleum and Energy and the Ministry of Industry, the market for oil and gas equipment and services in Norway over the next 10 years will represent an industrial market of \$35 billion and will be one of the largest and technologically most interesting market in Western Europe during this period. The Norwegian Parliament, the Storting, recently approved offshore development projects which will require investments of U.S.\$15 billion over the next five years. These projects include the building of a gas pipeline from the Statjord field to Kårstø (the first direct landing of petroleum on Norwegian soil), the development of the Block 34/10 Delta East structural oil and gas field, a \$1 billion refinery expansion program and the development of the Heimdal gas condensate field. In addition to these major field and pipeline developments, there will continue to be substantial equipment requirements for ongoing exploration, drilling and production activity. Currently, there are 10 drilling rigs active on the Norwegian continental shelf and it is anticipated that the Norwegian Petroleum Directorate will permit the drilling of approximately 25 to 30 wells annually over the next decade.

Fields now under production include Ekofisk, Frigg, Murchison, and Statjord. Consideration is being given to developing a number of other fields including N.E. Frigg, Odin, Valhall, Heimdal, and 34/10 (the Golden Block), in order to reach the Norwegian government's stated annual production target of 90 million TOE by the 1990s.

To date only six per cent of the Norwegian sector of the North Sea has been explored. Drilling activity has recently commenced north of the 62° parallel and planning has begun for the eventual exploration of the Svalbard (Spitzbergen) area of the Norwegian Arctic. Prospects for finding commercial resources of oil and gas in these areas are considered excellent.

Although it is Norwegian government policy to ensure the maximum utilization of Norwegian goods and services, Norwegian industry is capable of producing only a limited range of offshore oil and gas related equipment. Consequently, according to our industry contacts, Norway must import, and will continue to do so, more than 50 per cent of its petroleum hardware requirements. Machinery imports will take the form of communication systems and computers, heavy machinery such as cranes, generators, hoisting equipment and drilling equipment such as drilling packages, drill collars, compressors, electrical cable and transits as well as support equipment such as helicopters and pipe handling equipment.

b) The Canadian Industry

The Canadian offshore industry consists of those companies which supply equipment or services such as manufactured products, contracting and consulting services to undertake the exploration and exploitation of the resources of the oceans. The present major emphasis is on the exploitation of offshore oil and gas; however, other resources can include fresh water, food, power (wave, tidal or thermal) and minerals. The industry does not include traditional fishing equipment and marine transportation vessels.

During the last decade, the ocean industry in Canada has grown in size, output and technological capacity. Equipment such as drill ships, sub-sea production systems, sub-sea surveying systems, manned and remotely controlled submersibles have been developed and are marketed internationally.

There are approximately 240 companies in Canada whose production and services are either totally or partially engaged in this sector. Approximately 50 of these can be considered as core companies. These core companies accounted for sales of \$600 million in 1980, of which \$300 million was for export. Annual shipments have averaged approximately \$500 million and provided an estimated 6,000 man years of direct employment.

c) Recent Canadian Marketing Activity

Canada's marketing efforts in Norway date back over the last ten years. To complement private sector initiatives, the federal and provincial governments have sponsored and organized national exhibits in the biennial trade show, OFFSHORE NORTH SEA (ONS) in Stavanger, Norway. The Canadian government sponsored national exhibits in 1974 and 1976 and maintained information booths at ONS in 1978 and 1980. The Alberta government exhibited at ONS in 1974 and the Newfoundland government in 1974, 1976 and 1980.

In order to increase greater awareness of Canadian supply capability in offshore oil and gas equipment and services, a representative from Norway's national oil company, STATOIL and officials from the Norwegian Ministry of Petroleum and Energy undertook industry visits in Canada during March, 1981. Of the 22 companies visited the Norwegians indicated that more than half of these firms were considered as potential suppliers for their market.

A representative of Norwegian Petroleum Consultants A/S (NPC), an association of Norway's leading industrial firms, attended the National Petroleum Show in Calgary in May, 1981, and as a result of this trip several Canadian companies were added to NPC's approved vendors list.

There have been numerous provincial government fact-finding missions to Norway over the past few years, many of them at the ministerial level, with the objective of learning how the Norwegians have developed their offshore sector. Major topics of interest have included industrial benefits policy, social and economic impacts of the oil industry in existing communities, pollution control, labour legislation, and industrial co-operation between Canadian and Norwegian industry.

Petro-Canada has been very active in attempting to obtain concessions in the Norwegian sector of the North Sea. The company has entered bids during the 3rd, 4th, 5th and 6th Concession Rounds and was successful in the 4th Round in obtaining a five-per-cent development interest in Block 30/3 which, from drilling activity to date, looks most promising.

d) Recent Canadian Success Stories

Huntec ('70) Limited, Scarborough, Ontario, has sold seabottom profiling systems valued at CAD.800,000 directly to the Norwegian Continental Shelf Institute (IKU), Bergen, and to Geoteam A/S, a private geophysical company, in Oslo. This breakthrough into the Norwegian market was a direct spinoff from Huntec's participation at ONS in Stavanger.

Farr International (79) Ltd., Edmonton, Alberta, has become a leading supplier of power tongs to rig operators in the Norwegian continental shelf with sales to date of more than CAD.1.5 million. Farr's equipment was introduced to the Norwegian market through the OFFSHORE EUROPE oil show in Aberdeen, Scotland.

Marystown Shipyard Limited, Marystown, Newfoundland, has delivered four diving/supply vessels and five anchor-handling tugs with a total value of approximately CAD.100 million to Norwegian offshore operators. These orders resulted from a visit to Norway by a ministerial delegation from Newfoundland.

Northern Telecom Limited, Montreal, has recently delivered four SL-1 PABX systems to Mobil Exploration Norway Inc. and one SL-1 PABX to Amoco Norway Oil Co. The total value of these systems is estimated to be approximately CAD.1.25 million.

e) Market Impediments

Major impediments facing Canadian exporters to this market include Norway's "Norwegianization policy", entrenched foreign competition characterized by a bias in favour of U.S. manufactured products, a lack of knowledge regarding Canadian capabilities, and the Norwegian interpretation of industrial co-operation. Section 54 of the Royal Decree of December 8, 1972, highlights Norway's "Norwegianization policy" regarding the exploration and exploitation of petroleum from the Norwegian continental shelf. It reads as follows:

"The licensee shall use Norwegian goods and services in the activity as far as they are competitive with regard to quality, service, schedule of delivery and price.

"Norwegian contractors shall be included in invitation for tenders as far as they produce goods or render services of the kind required.

"On evaluating the offers given by Norwegian or foreign bidders, the licensee shall take into account the extent to which the bidders will use Norwegian goods and services.

"The licensee is responsible for the observation of these provisions by his contractors or their sub-contractors."

In monitoring the provisions of Section 54, the Ministry of Petroleum and Energy has established a requirement for regular and systematic reporting of information by the

operators. Purchases are scrutinized by this Ministry to ensure that Norwegian interests are obtaining a reasonable share and in some cases justification must be given by the operator as to why a particular foreign supplier was chosen. In addition, the Ministry of Petroleum and Energy has the authority to add names of Norwegian firms to "bidders lists" of the oil companies when it is felt that such Norwegian firms are capable of meeting particular specifications in accordance with the criteria set down in Section 54 (i.e. quality, service, delivery and price). The Norwegian government further takes the view that a price from a Norwegian firm, which is up to 10 per cent in excess of other competitors, should be considered as equally competitive, from a price point of view, as the others.

Norway's industrial co-operation policy is unique and can often serve as a non-tariff barrier. Needing only 10 per cent of their oil for home consumption, the Norwegians are in the fortunate position of using oil and gas primarily as an industrial tool and export resource. They are able therefore to interpret industrial co-operation as the awarding of oil and gas concessions in the Norwegian sector of the North Sea in return for a prospective applicant providing attractive industrial benefits to Norway. These industrial benefits need not be associated with the petroleum industry.

Prospective applicants must provide the Norwegian government with information not only on their technical expertise and financial strength but also on their ability to use Norwegian goods and services, their potential and history as a constructive collaborator, and their ability to attract new industries to Norway.

f) The Competition and Competitor Activity

The United States has played a leading role in the development of Norway's offshore oil and gas industry and is the major supplier to the Norwegian market. The country's first commercial discovery Ekofisk was brought onstream by the Phillips Petroleum Co. of Oklahoma. Many other U.S. based multinationals such as Mobil, EXXON, and Conoco have also played prominent roles in the exploration and development of Norway's offshore resources. These companies have tended to utilize American engineers and contractors who through their familiarity with U.S. manufactured goods and services have been favourably disposed to reply on them.

Competition from other foreign manufacturers, primarily the Japanese, British, French, Germans, Dutch, Finns and Swedes, is also very strong. If Canadian firms are to

improve their performance in this highly competitive market, it is essential that they demonstrate more perseverance and long-term commitment to the market and thus illustrate Canadian determination and capability. Companies attempting to break into the Norwegian market for the first time must be on the spot or at least have a knowledgeable agent working on their behalf. Unfortunately, as indicated by a recent survey of oil company purchasing departments, few Canadian companies are registered here as approved vendors and fewer still have visited the marketplace.

The oil industry is a very conservative one and is disposed to rely heavily upon "traditional" suppliers. Loyalty to proven vendors capable of meeting delivery requirements is a cornerstone of purchasing policy in the industry. The adherence to delivery schedules is of vital importance and backup service, including provision of spare parts, is essential. It is impossible to "export from a desk", as the oil companies and contractors have little interest or time for "catalogue shopping".

g) The Action Plan

Increased awareness of Canadian capability and greater contacts with Norwegian buyers are the prime ingredients to successful marketing. In order to achieve sustained market development, the following action plan proposes various mechanisms to assist Canadian industry:

1. prepare in-house study to match Canadian supply capabilities in offshore oil and gas equipment with Norwegian requirements and identify prospects for joint ventures;
2. participate with a national exhibit at Offshore Northern Seas (ONS 82) in Stavanger, Norway;
3. attend the Offshore Northern Seas 1982 show with an official trade delegation possibly led by the Minister of State for Trade;
4. liaise closely with participating provincial governments, (i.e. Alberta, Quebec and Nova Scotia), at ONS 82 to ensure a unified and cohesive Canadian presence;
5. undertake joint study by posts in Oslo, London and Glasgow to co-ordinate Canadian marketing efforts of offshore oil and gas equipment for the North Sea market;

6. compile as a reference source updated Norwegian buyers' guide of offshore oil and gas related goods and services;
7. co-sponsor a seminar on Canadian/Norwegian trade and investment opportunities in the offshore sector with the Export Council of Norway;
8. invite selected buyers to visit Canada as a follow-up to ONS 82;
9. as a further follow-up to ONS 82, organize an outgoing technology mission of Canadian manufacturers seeking joint ventures, licensing agreements or direct sales with Norwegian firms;
10. publish an updated Canadian directory for distribution to potential customers.

A GLOSSARY OF ABBREVIATIONS

DEP	The European Trade Development Bureau
DPP	International Marketing Policy Group
EEC	European Economic Community
EFTA	European Free Trade Association
GEP	The European Political Bureau
GNP	Gross National Product
IFS	Public Information Directorate
MCH	Machinery Branch
NPC	Norwegian Petroleum Consultants
OECD	Organization of Economic Cooperation and Development
ONS	Offshore Northern Seas
TIB	Ocean Industries Branch
TOE	Tonnes of Oil Equivalents

APPENDICES

APPENDIX 1

RECENT ECONOMIC INDICATORS

(Year-to-Year Percentage Change)

	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981**</u>
Real GDP	3.6	3.3	3.2	2.9	0.75
Consumer Prices	9.1	8.1	4.7	12.0	12.7
Average Hourly Earnings (Manufacturing)	11.5	8.8	3.8	10.0	11.0
Industrial Production	0.0	-1.5	2.6	1.0	-0.5
Unemployment Rate***	1.5	1.8	2.2	1.5	1.8
Broad Money	15.7	11.4	14.2	9.0	10.1
Government Deficit*	-1.9	-2.9	-3.0	-3.6	-
Exports*	10.7	13.1	16.2	20.6	-
Imports*	15.5	13.9	16.5	19.4	-
Trade Balance*	-4.8	-0.8	-0.3	+1.2	-
Current Account Balance*	-6.0	-2.5	-1.4	+1.0	-

* In billions of CDN dollars (\$1 CDN = NOK 4.25)

** Estimates

*** Absolute percentage

Source: IMF International Financial Statistics, February 1981 and
OECD Economic Outlook, December 1980.

APPENDIX 2

CANADIAN TRADE WITH NORWAY

(\$ MILLION)

	<u>EXPORTS</u>	<u>IMPORTS</u>	<u>NET TRADE BALANCE</u>
1972	152.5	77.1	75.4
1973	181.1	77.7	103.4
1974	233.3	106.3	127.0
1975	170.4	120.1	50.3
1976	151.8	133.5	18.3
1977	233.4	69.8	153.6
1978	144.3	56.5	87.8
1979	279.3	89.1	190.2
1980	334.9	80.4	254.5
1981	422.4	169.1	253.3

Source: Statistics Canada

APPENDIX 3

CANADIAN EXPORTS TO NORWAY

(\$ 000's)

	<u>1979</u>	<u>1980</u>	<u>1981</u>
TOTAL EXPORTS	279,321	334,897	422,443

MAJOR EXPORT ITEMS - 1980 Ranking

Nickel in ores, concentrates and scrap	103,628	157,389	233,563
Copper in ores, concentrates and scrap	25,522	50,203	55,086
Metal bearing ores and concentrates, n.e.s.	34,409	31,821	34,800
Rapeseed oil cake and meal	8,108	11,001	10,335
Inorganic bases and metallic oxides, n.e.s.	--	750	10,058
Ships, boats and parts	19,965	265	9,975
Aircraft, complete with engines	3,520	2,732	9,589
Aircraft parts, except engines	1,157	1,612	5,172
Fur skins, undressed	3,760	1,536	4,735
Fish (all preparations)	4,744	4,665	3,555
Radioactive ores and concentrates	--	--	2,862
Office machines and equipment	1,622	1,496	2,547
Materials handling equipment and parts, n.e.s.	--	--	2,311
Synthetic rubber and plastic materials	1,229	1,350	1,543
Construction machinery and equipment	1,285	1,781	1,321

PER CENT BY MAJOR

COMMODITY CATEGORIES

	<u>1979</u>	<u>1980</u>	<u>1978</u>
Food, feed, beverages and tobacco	26,860 (9.6%)	20,326 (6.1%)	19,004 (4.5%)
Crude materials, inedible	168,783 (60.4%)	242,224 (72.3%)	332,717 (78.8%)
Fabricated materials, inedible	44,241 (15.8%)	46,550 (13.9%)	18,469 (4.4%)
End products, inedible	39,420 (14.1%)	25,526 (7.6%)	51,876 (12.3%)

Source: Statistics Canada.

APPENDIX 4

CANADIAN IMPORTS FROM NORWAY

(\$ 000's)

	<u>1979</u>	<u>1980</u>	<u>1978</u>
<u>TOTAL EXPORTS</u>	<u>89,074</u>	<u>80,373</u>	<u>56,709</u>

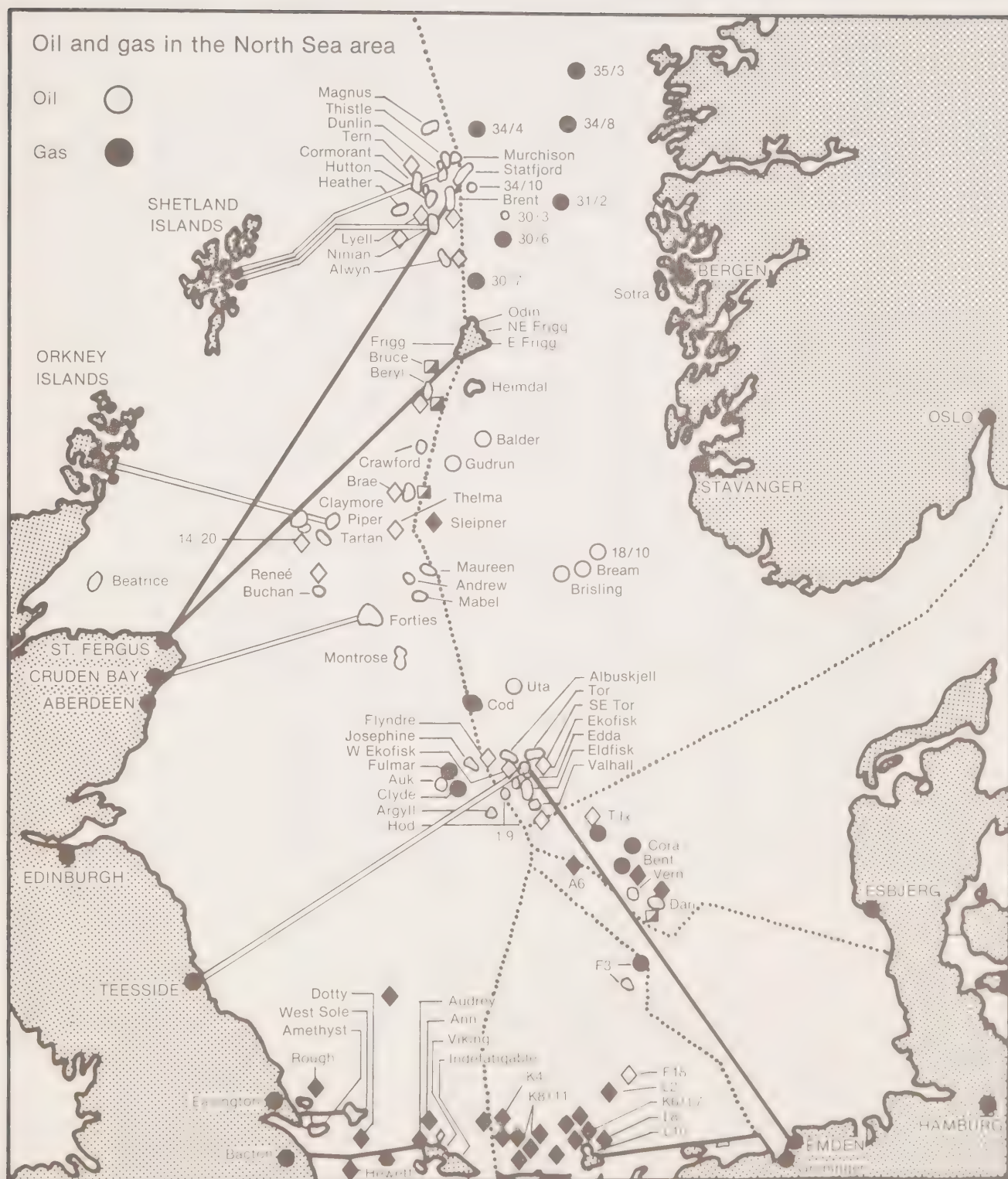
MAJOR IMPORT ITEMS - 1980 Ranking

Crude petroleum	---	---	96,817
Nickel and alloys	9,524	15,400	9,970
Ships, boats and parts, except engines	15,044	6,795	5,830
Fish and marine animals	2,777	2,541	4,052
Ferromanganese incl. spiegeleisen	---	5,103	3,351
Pulp and paper industries machinery	337	2,144	3,184
Cheese	2,803	2,611	2,587
Ferrosilicon	---	416	2,292
Commercial fishing equipment and parts, n.e.s.	---	2,926	2,184
Nickel in ores, concentrates and scrap	---	623	2,033
Hoisting machinery	1,381	2,653	1,979
Plows and parts	---	2,341	1,690
Silicomanganese including silico spiegel	---	2,430	1,601
Fur skins, undressed	2,726	2,200	1,451
Aluminum, including alloys	2,024	1,224	1,438
Fish preparing machinery and parts	---	572	1,343
Aircraft complete with engines	---	---	1,219
Abrasive basic products	831	1,483	1,158

PER CENT BY MAJOR
COMMODITY CATEGORIES

	<u>1979</u>	<u>1980</u>	<u>1978</u>
Food, feed, beverages and tobacco	5,976 (6.7%)	6,270 (7.8%)	7,859 (4.6%)
Crude materials, inedible	6,045 (6.8%)	3,198 (4.0%)	100,618 (59.5%)
Fabricated materials, inedible	29,218 (32.8%)	32,090 (40.0%)	28,020 (16.6%)
End products, inedible	47,377 (53.2%)	38,137 (47.5%)	31,991 (18.9%)

Source: Statistics Canada.



LIST OF DRILLING RIGS ETC. REGISTERED WITH THE NORWEGIAN OFFSHORE ASSOCIATION

July 1981

OWNERS	NAMES	YARD	DESIGN	DELIVERY	MISC. LANEC	INFORMATION
A-MEMBERS (Norwegian Flag)						
Fred. Olsen & Co. Fred. Olsensgt. 2 P.O.Box 1159 - Vikka, Oslo 1 tlf. 02/41 50 70	SS Borgstien Dolphin	Nylands Verksted	H-3	June 7, 1975		(prev. Haakon Magnus)
	SS Borgstien Dolphin	A/S Bergens M.V.	H-3	August 19, 1977		(construction platform)
	SS Borgstien Dolphin	Rauma Repola, Finland	H-3	November 25, 1977		(prev. Fernstar)
	SS Husabill Delfin	Mitsui, Japan	H-3	January 26, 1978		(Constr.pl.form, prev.Borgstien Dolphin)
A/S Olsen & Ugelstad Fr. Nansens Pl. 5, Oslo 1 tlf. 02/41 70 35	Ju Fjellidril	Bethlehem Steel Corp. U.S.A.	Ju-250	June 8, 1976		
	SS Polymariner	Aker-Verdal	H-3	June 6, 1975		(construction platform)
K/S Rasmussen Drilling A/S P.O.Box 37, 4601 Kristiansand S tlf. 042/21 490	SS Ross Rig	Trosvik V/A/S Frammas M.V.	H-3	June 27, 1975		
	Ross Drilling Co. A/S P.O.Box 265, 3201 Sandefjord tlf. 034/63 481					
K/S Seaway Offshore Work Platform A/S C/O Stolt-Nielsen Rederi A/S Haraldsgt. 125, P.O.Box 373 5501 Haugesund, tlf. 047/28 824	SS Seaway Swan	Rauma Repola, Finland	H-3 D.P. platform	May 5, 1978		(maintenance platform)
	SS West Venture	C.F.E.M., France	Nor'g 5	July 27, 1973		
A/S Smedvig Drilling Co. P.O.Box 110, 4001 Stavanger tlf. 04/52 00 40	SS Henrik Ibsen	C.F.E.M., France	Pentagone 88	February 15, 1976		(accommodation platform)
	Stavanger Drilling I A/S & Co. Testagt. 30-32 P.O.Box 608, 4001 Stavanger tlf. 04/53 20 10					
Ugland Shipping Co. A/S P.O.Box 190, 4891 Grimstad tlf. 041/41 611	SS Zapata Ugland	Bethlehem Steel Corp. U.S.A.	SS 3 000	May 22, 1974		
	SS Treasure Hunter	Nylands Verksted	H-3	December 15, 1975		(construction platform)
Wilh. Wilhelmsen P.O.Box 1359 - Vikka, Oslo 1 tlf. 02/11 12 00	SS Treasure Seeker	Levingston, Singapore	H-3	May 20, 1977		
	SS Treasure Finder	Rauma Repola, Finland	H-3	August 10, 1977		(construction platform)
B-MEMBERS Jebens Drilling A/S P.O.Box 4145, 5001 Bergen tlf. 05/31 03 20	SS Aladdin	Avondale, U.S.A.	Odeco	October 6, 1973		(British registered, prev. Waage Drill I)
	SS Sindbad Saxon	Avondale, U.S.A.	Odeco	April 4, 1974		(British registered, prev. Waage Drill II)
A/S Norsedril V/Sig. Herlofson & Co. A/S Drammensveien 88 B, Oslo 2 tlf. 02/56 31 90						

SS = SEMI SUBMERSIBLE PLATFORM

DS = DRILLSHIP = NAVIRE DE FORAGE

JU = JACK-UP = AUTO ELEVATRICE

LIST OF DRILLING RIGS ETC. REGISTERED WITH THE NORWEGIAN OFFSHORE ASSOCIATION
July 1981

OWNERS	NAMES	YARD	DESIGN	DELIVERY	MISCELLANEOUS INFORMATION
A-ARMEDEN (Norwegian flag)					
Blystad Offshore A/S Sandakervn. 52 P.O.Box 4206 - Torshov, Oslo 4 tlf. 02/21 95 55	SS Songa Star	Nylands Verksted	H-3	July 3, 1976	(prev. Belford Dolphin) (construction platform)
K/S Sverre Ditlev-Simonsen Drilling A/S Haakon VII's gt. 1 P.O.Box 1590 - Vik, Oslo 1 tlf. 02/41 40 20	SS Vildkat	Aker-Verdal A/S	H-3	May 3, 1977	
Dolphin Services A/S 405b Tananger tlf. 04/69 67 22	SS Byford Dolphin	A/S Bergens M.V.	H-3	February 9, 1974	(prev. Deep Sea Driller)
A/S Dynamic Drilling v/Helmer Staubo & Co. Rådhusgt. 23 P.O.Box 1707 - Vik, Oslo 1 tlf. 02/42 70 40	DS Pelerin	I.H.C., Netherlands	Pelican, D.P. Drillship	November 17, 1976	
Uyvi Offshore A/S Haakon VII's gt. 1 P.O.Box 1662 - Vik, Oslo 1 tlf. 02/41 01 00	SS Dyvi Alpha JU Dyvi Beta JU Dyvi Gamma SS Dyvi Delta	Trosvik V/A/S Frammas M.V. C.F.E.M., France C.F.E.M., France Rauma Repola, Finland	H-3 ETA-Europe ETA-Europe Kanger 12	December 11, 1974 June 6, 1977 July 12, 1977 June 21, 1981	
Golar-Nor Offshore A/S Fjordgt. 1 P.O.Box 482, 7001 Trondheim tlf. 075/47 155	SS Nortroll SS Nortrym	Trosvik V/A/S Frammas M.V. Aker-Verdal A/S	H-3 H-3	April 8, 1976 August 10, 1976	
Irgens Larsen A/S Fr. Nansens Pl. 4 P.O.Box 1340 - Vik, Oslo 1 tlf. 02/41 90 40	SS Neptune Nordraug	Trosvik V/A/S Frammas M.V.	H-3	December 12, 1976	(prev. Nordraug)
K/S Mørland Offshore A/S P.O.Box 1, 4801 Arendal tlf. 041/25 060	SS Norjarl	Aker-Verdal/Bergens M.V.	H-3	July 15, 1974	
Nordenfjeldske Drilling A/S Kjøpmannsgt. 52 P.O.Box 87, 7001 Trondheim tlf. 075/20 500	SS Deepsea Saga	A/S Bergens M.V.	H-3	July 26, 1975	
Odnefell Drilling and Construction A/S Kokstadflaten 5 5065 Blomsterdalen tlf. 05/22 77 80					

APPENDIX C

OPERATORS ON THE NORWEGIAN CONTINENTAL SHELF

<u>Company</u>	<u>Contact</u>
AMOCO Norway Oil Company POB 388 4001 STAVANGER	Mr. R.M. Ridley, President and General Manager
B.P. Petroleum Development of Norway A/S POB 3077 Mariero 4001 STAVANGER	Mr. J.W.G. Sharp, General Manager
Conoco Norway Inc. POB 488 4001 STAVANGER	Mr. D.F. Gregg, Managing Director
Elf Aquitaine Norge A/S POB 168 4001 STAVANGER	Mr. P. Chouzenoux, Managing Director
Esso Exploration and Production Norway Inc. POB 560 4001 STAVANGER	Mr. C.C. Taylor, President
Mobil Exploration Norway Inc. POB 510 4001 STAVANGER	Mr. H.R. Inman, General Manager
Norsk Agip A/S POB 1408, Vika OSLO 1	Mr. Franco Bandinelli, Managing Director
Norsk Hydro Bygdoy Allé 2 OSLO 2	Mr. Hans O. Bjontegard, Director, Oil Division
Norske Gulf Production Company A/S POB 187 5001 BERGEN	Mr. P.E.C. Reed, Exploration Manager
Norske Shell Exploration and Production POB 10 4033 FORUS	Mr. Gerrit Boot, Director
Phillips Petroleum Company Norway POB 220 4056 TANANGER	Mr. U.O. Cox, Managing Director

APPENDIX C

Saga Petroleum A/S
POB 550
1301 SANDVIKA

Mr. Asbjorn Larsen,
Managing Director

STATOIL
POB 300
4001 STAVANGER

Mr. Arve Johnsen,
Managing Director

Union Oil Norge A/S
POB 377
4301 SANDNES

Mr. G.H. Laughbaum,
Managing Director

APPENDIX D

SHIPYARDS WITH RIG AND PLATFORM BUILDING CAPABILITIES

<u>Company</u>	<u>Contact</u>
Aker Trondelag A/S POB 896 7001 TRONDHEIM	Mr. Thor Frey Larsen, Director
A/S Framnes mek. Verksted A/S POB 171 3201 SANDEFJORD	Mr. Kristoffer Wegger, Managing Director
Kaldnes mek. Verksted A/S POB 420 3101 TONSBORG	Mr. Per Anker-Nilssen, Managing Director
Moss Rosenberg Verft A/S POB 139 4001 STAVANGER	Mr. M.H. Gronner, Managing Director
Stord Verft A/S 5400 STORD	Mr. Arne van der Hagen, Director
Trosvik Group POB 126 3901 PORSGRUNN	Mr. Ola Horg Jacobsen, Managing Director

APPENDIX E

MAJOR NORWEGIAN SUPPLY BOAT OPERATORS

<u>Company</u>	<u>No. of Ships</u>	<u>Contact</u>
Kare Misje & Co. POB 1994 5011 NORDNES	5	Mr. Kare Misje) Mr. Per Misje) owners
Normand Supply Solstad Rederi A/S POB 130 4281 SKUDENESHAVN	13	Mr. Johannes Solstad, Managing Director
Norway Supply Ships Peder Smedvig POB 110 4001 STAVANGER	6	Mr. Peder T. Smedvig) Mr. Harald Johansen) owners
Stad Seaforth Shipping A/S Sverre Farstad & Co. POB 130 6001 ALESUND	6	Mr. Sverre Farstad, Director
Supply-Service A/S Josefines gate 37 OSLO 3	5	Mr. John Schia, Managing Director
Viking Supply Ships Bendt Rasmussen POB 9 4601 KRISTIANSAND S.		Mr. Reidar Ingvaldsen) Mr. Bendt Rasmussen)Directors Mr. Einar Ogrey)
Wilhelmsen Offshore Services POB 1359, Vika OSLO 1		Mr. Leif Landsverk Managing Director

APPENDIX F

MAJOR NORWEGIAN SUPPLY BASES, SUPPLY COMPANIES AND DISTRIBUTORS

<u>Company</u>	<u>Contact</u>
<u>Supply Bases</u>	
Aker Norsco A/S 4056 TANANGER	Mr. Thomas Egeberg, Managing Director
Coast Center Base A/S & Co. POB 55-CCB 5363 AGOTNES	Mr. Jan-Henrik Haveland, Managing Director
North Sea Exploration Services A/S POB 138 4001 STAVANGER	Mr. Knut Holm, Managing Director
<u>Supply Companies and Distributors</u>	
Ahlsell Offshore Lervigsveien 32 4000 STAVANGER	Mr. Klaus Engelsgjerd, Division Manager
Aker Norsco A/S 4056 TANANGER	Mr. Thomas Egeberg, Managing Director
Aspelin-Storbull Stavanger A/S POB 109 4001 STAVANGER	Mr. Joachim Berner, Director
Bergen Oil Industry Services POB 1593 5001 BERGEN	Mr. Jan Hvidsten, Manager
A/S Bergen Rorhandel POB 872 5001 BERGEN	Mr. Jan Saelemyr, Manager, Industry, Ship and Oil Department
Coast Center Base A/S & Co. POB 55-CCB 5363 AGOTNES	Mr. Jan-Henrik Haveland, Managing Director
GMC Offshore A/S POB 4048 Tasta 4001 STAVANGER	Mr. Dave Boyd, Manager
Stavanger Casing Crews A/S POB 5019 Dusavik 4001 STAVANGER	Mr. Gisli Gislason, General Manager

APPENDIX F

<u>Company</u>	<u>Contact</u>
W. Giertsen A/S POB 1904 5011 BERGEN	Mr. W. Giertsen, Managing Director
MENTO A/S POB 415 4001 STAVANGER	Mr. Bjorn Dahle, Manager
MIDCO Norway Inc. POB 688 4001 STAVANGER	Mr. J. Tjersem, Resident Manager
North Sea Exploration Services A/S POB 138 4001 STAVANGER	Mr. Knut Holm, Managing Director
Rigg Supply A/S POB 71 4056 TANANGER	Mr. Olav E. Sola, Manager
Stavanger Rorhandel A/S POB 65 4033 FORUS	Mr. Olav G. Hestness, Manager

APPENDIX G

NORWEGIAN DIVING COMPANIES

<u>Company</u>	<u>Contact</u>
Comex Norge A/S POB 549 4001 STAVANGER	Mr. Michael Auberty, Managing Director
Dolphin Services A/S 4056 TANANGER	Mr. Sverre Lofthus, Managing Director
Scan-Dive A/S Lervigsveien 22 4000 STAVANGER	Mr. Odd Gaskjenn, General Manager
Stolt-Nielsens Seaway 5500 HAUGESUND	Mr. Leif Gjesdahl, Manager
Wilhelmsen Offshore Services POB 1359, Vika OSLO 1	Mr. Leif Landsverk, Managing Director
Willco A/S POB 75 4056 TANANGER	Mr. Michael F. Williams, Director

APPENDIX H

LEADING NORWEGIAN COMPANIES OFFERING PRODUCTS AND SERVICES
TO THE OIL INDUSTRY

<u>Company</u>	<u>Product/Service</u>
Air-Executive Norway A/S POB 115 1330 OSLO LUFTHAVN	Air transport services
Aker Engineering A/S Tjuvholmen OSLO 2	Engineering
Aker Group Munkedamsveien 45 OSLO 2	Offshore products and services
Anchor Drilling Fluids A/S 4056 TANANGER	Drilling mud
ASEA A/S POB 6540, Rodelokka OSLO 5	Electrical equipment
Atlas Copco A/S POB 10, Vevelstad 1405 LANGHUS	Compressed air equipment
K/S BENNEX A/S POB 1992 5011 NORDNES	Pollution control
A/S Bergens mek. Verksteder POB 858 5001 BERGEN	Marine engineering, diesel engines, hydraulic deck machinery
Bloms Oppmaling A/S Hoybratenveien 13 B OSLO 10	Surveying
Brodr. Brunvoll Motorfabrikk A/S POB 370 6401 MOLDE	Bow and stern thrusters
A/S Computas Veritasveien 1 1322 HOVIK	Data processing, structural engineering
CORRINTEC A NORCEM A/S Company POB 1386, Vika OSLO 1	Cathodic protection

APPENDIX II

<u>Company</u>	<u>Product/Service</u>
Det norske Veritas POB 300 1322 HOVIK	Ship classification, offshore certification
A/S Elektrisk Bureau POB 98 1360 NESBRU	Communications
Elkem A/S POB 295 3101 TONSBORG	Steel and fibre ropes
Haakon Ellingsen & Sonn Tekniske A/S POB 64 1301 SANDVIK	Pneumatic valve actuators
GLAMOX A/S 6400 MOLDE	Fluorescent light fittings
HELIX A/S Godoygt. 8 6000 ALESUND	CP propellers, CP thrusters, propeller nozzles
A/S Helly-Hansen POB 218 1501 MOSS	Survival suits, work clothes
Aug. P. Horn A/S POB 188 1501 MOSS	Work clothes
A/S Hydraulik Brattvåg 6270 BRATTVAG	Hydraulic deck auxiliaries, offshore products
A/S Kongsberg Vapenfabrikk POB 25 3601 KONGSBERG	Mechanical and electronic equipment, power generation, maintenance gas turbine-driven power plants, electronic navigation, data acquisition, engineering, production servicing
Kvaerner Engineering A/S POB 222 1324 LYSAKER	Engineering services

APPENDIX H

<u>Company</u>	<u>Product/Service</u>
Frank Mohn A/S POB 98 5051 NESTTUN	Submerged hydrostatically- driven pumps
Moss Rosenberg Verft A/S POB 53, Jeloy 1501 MOSS	Safety systems
National Elektro A/S Marine/Offshore Division Spelhaugen 20 5033 FYLLINGSDALEN	Electrical installations and equipment
NORCEM Offshore Division POB 1386, Vika OSLO 1	Drilling, services, supply
NORCONSULT A/S POB 9 1322 HOVIK	Consulting services
NORGEAR A/S POB 40 3201 SANDEFJORD	Power transmission systems
NORION A/S 4710	Fire-retardant work and bed clothes
NorMar A/S Chr. Krohgs Gate 32 B OSLO 1	Cranes
NORPUMP A/S POB 17 5068 FLESLAND	Pumps
A/S Norsk Elektrisk & Brown Boveri NEBB POB 1174, Sentrum OSLO 1	Power packages
Norsk Hamnerverk A/S POB 129 4001 STAVANGER	Firefighting equipment

APPENDIX H

<u>Company</u>	<u>Product/Service</u>
Norsk Hydro A/S POB 68/70 3661 RJUKAN	Remote-control valve systems
A/S Norsk Kabelfabrik POB 369 3001 DRAMMEN	Flame-resistant cables
Norsk Marconi A/S POB 50, Manglerud OSLO 6	Telecommunications equipment
A/S Norsk Staaltaugfabrik POB 371 7001 TRONDHEIM	Steel wire ropes
Norwegian Contractors POB 40, Ankertorvet OSLO 1	Condeep platform construction Condeep platform design
Norwegian Petroleum Consultants A/S (NPC) POB 113 1360 NESBRU	Consulting services
Oil Industry Services A/S POB 46 4620 VAGSBYGD	Design, fabrication, repairs
Fred. Olsen Offshore POB 340, Sentrum OSLO 1	Rigs, support services, fabrication
The Otter Group SINTEF-NTH 7034 TRONDHEIM	Research and development
Petcon Petroleum Consultants A/S POB 60 4033 FORUS	Petroleum consultants
A/S Pusnes POB 102 4818 PUSNES	Mooring systems
A/S Raufoss Ammunisjonsfabrikker POB 2 2831 RAUFOSS	Helidecks, anchors, steel fabrication

APPENDIX H

<u>Company</u>	<u>Product/Service</u>
Rotator Norway A/S POB 25 4645 NODELAND	Valves and ventilators, grinders
Siemens A/S POB 10, Veitvet OSLO 5	Power, instrumentation, communication
SIMRAD A/S POB 6114, Etterstad OSLO 6	Electronic/acoustic products
A/S Skarpenord POB 44 3971 LANGESUND	Corrosion control, engineering and supply
Skip og Maskin A/S POB 1486, Vika OSLO 1	Drilling equipment
Standard Telefon og Kabelfabrik A/S (STK) POB 60, Okern OSLO 5	Submarine cable, turnkey capability
STEENHANS Brodrene Steen-Hansen A/S Kruses gate 8 OSLO 2	Intercommunication systems
Thune-Eureka A/S POB 38 3401 LIER	Pumps and pumping systems
Ugland Group POB 128 4891 GRIMSTAD	Drilling, pipelaying, lifting, fabrication
UNOCO A/S POB 2827, Toyen OSLO 6	Welding equipment and gases, Firefighting equipment, skimmer systems
Vigor Engineering A/S POB 143 7301 ORKANGER	Platform topside facilities, design
A/S Westad Armaturfabrikk 3360 GEITHUS	Valves

APPENDIX H

<u>Company</u>	<u>Product/Service</u>
A/S Wichmann 5420 RUBBESTADNESET	Propulsion systems
Jonas Oglaend A/S POB 115 4301 SANDNES	Work clothes

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